

FIELD INVESTIGATION TEAM
ECOLOGY AND ENVIRONMENT, INC.

MEMORANDUM: REGION I



SDMS DocID 583360

115

TO: Robert Young

FROM: Lori J. Fucarile, Project Manager

SUBJECT: Trip Report - Truk Away Landfill, Warwick, Rhode Island
RID 987493822

DATE: July 28, 1982

CC: John Hackler, Barbara Ikaleinan, File

IN REPLY REFER TO:

COMMENTS:

1.0 Objective

Ecology and Environment, Inc. (E&E) Region I Field Investigation Team (FIT) was tasked by EPA to perform a site inspection and sampling (if appropriate) at the Truk-Away Landfill in Warwick, Rhode Island to rank this site in the hazard ranking system under Technical Direction Document No. Fl-8207-09.

2.0 FIT Contributors

The following Region I Field Investigation Team members made major contributions to this study in the capacities noted: Project Manager - Lori J. Fucarile, Environmental Engineer - Keith Brown.

3.0 Brief History of Site

This 30 acre site, previously owned and operated by Charles Wilson, and presently owned by the Theodore Francis Green Memorial State Airport is located in the City of Warwick approximately three miles west of Narragansett Bay, two miles north of Greenwich Bay and adjacent to the T.F. Green Memorial State Airport Southeast runway.

The landfill had accepted municipal and industrial wastes and was alleged to have received hazardous wastes. On June 4, 1982 during a Rhode Island State inspection of the site an accompanying informant stated that during the early 1970's he was responsible for overseeing the disposal of drummed chemical waste at the Truk-Away Landfill. An indication of the types of chemicals and waste products involved are as follows: sulfur monochloride, benzoyl chloride, xylol, toluene, pyridene, spent solvents, nitrobenzene, chlorobenzene, trichloroethylene, dyes, pigments, intermediate compounds made from benzene reactions, phenols, hydrogen peroxide, and benzene sulfonyl chloride. The informant stated that he was aware of "hundreds of drums" which were disposed of at the Truk-Away Landfill.

In December and October 1980 and February 1981 sampling of three surface water locations were performed by the Rhode Island Division of Water Resources. These locations were Brush Neck Cove, Little Pond and Buckeye Brook. They were sampled for metals and volatile organics. Sample analysis is included.

During an E&E April 1982 site visit, noticeable odor and a leachate plume was noted on the western border of the site.

4.0 Approach to the Site Inspection

4.1 Air Characterization

There are no available air monitoring data for the site area under study in Warwick, Rhode Island; thus the photoionization instrument (Hnu) will be taken on site to characterize the ambient air.

4.2 Groundwater Characterization

There are no groundwater wells within the vicinity of the site used for either drinking water or industrial process water. No groundwater samples may be taken at the site without a installation of monitoring wells at the landfill.

4.3 Surface Water Characterization

No surface water samples of the leachate plume have been taken. They will be taken during our site investigation as will surface water samples of Buckeye Brook.

5.0 Results of Field Analytical Efforts

5.1 Air Characterization

At first leachate seep located at the western edge of the site the HNu showed readings of 100-150 ppm total volatiles. At the second leachate seep located at the western edge of the site the HNu showed readings of 100-150 ppm total volatiles. At the third leachate seep located at the southeastern edge of the site the HNu showed readings of 50-100 ppm total volatiles. Continuous air monitoring was conducted while on-site. No other areas of the site showed air contamination.

5.2 Groundwater Characterization

No groundwater samples could be taken as previously explained.

5.3 Surface Water Characterization

Six samples were taken while on-site. They were analyzed by gas chromatography on the organic vapor analyzer. Results were as follows:

<u>Sample #</u>	<u>Location</u>	<u>OVA</u>
001	First leachate seep (west)	0
002	Second leachate seep (west)	2 ppm tetrachloroethylene
003	Swamp (southwest)	0
004	Third leachate seep (southeast)	2 ppm toluene
005	Plume as leads into Buckeye Brook (east)	0
006	Buckeye Brook as leaves site (east)	0

6.0 General Comments

Background information for the HRS was established from information on file at the Rhode Island Department of Environmental Management, RIDEM, and from a site inspection and sampling performed by Ecology and Environment, Inc. The estimates developed such as population densities and hazardous waste quantity were derived from existing data in the RIDEM file, conversations with state and city officials, professional judgement, and the method description for the HRS.

The Migration Hazard Mode Score (Sm) was based upon route characteristic information for groundwater, observed release data for surface water and observed release data for air. There are no known groundwater wells within the vicinity, thus, no observed groundwater has been documented. Observed release data for surface water was obtained from state analytical results and E&E preliminary screening. Observed release data for air was obtained from on-site air monitoring conducted during the E&E site inspection.

The Fire and Explosion Hazard Mode Score (Sfe) was not applicable to this site since there was no explosion threat based on field observations during the E&E site inspection nor was it certified an explosion threat by a state or local fire marshall.

The Direct Contact Hazard Mode Score (Sdc) was not obtained from an observed incident but rather from HRS calculation as noted on the enclosed Direct Contact Worksheet.

The total Sm Score for the Truk-Away Landfill, as presented within, is 29.2. Due to a lack of existing factual data regarding hazardous waste characteristics many estimates were made within the HRS which were based upon informant testimony found in the RIDEM files. Rough estimates were developed in the following categories: physical state of waste at time of disposal, waste characteristics and hazardous waste quantity. Population figures were derived from USGS topographical maps and conversation with city officials. These figures included all population within a certain circumference and not just those potentially affected residents downgradient of the site. The score for groundwater may be unnecessarily high

since there is virtually no groundwater use in the area and public water supply is readily available. The score for air may be unnecessarily high since contamination was detected directly above a leachate seep and not throughout the site.

7.0 Recommendations

As a result of the identified HRS data deficiencies, it is recommended that a field investigation be conducted including the installation and sampling of on-site monitoring wells and that a thorough assessment of the site be conducted to determine waste characteristics and quantities. Without such information an accurate HRS score can not be formulated.


Lori J. Fucarile

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Enclosures

Department of Environmental Management
Hazardous Waste in the Buckeye Brook Area
Warwick, R.I.

Table I

Sample Station	Date	As*	Ba	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn	Coliforms/100m Total	Fecal Coliforms/100m
Buckeye Bk at Warwick Ave	20Oct.80 15Dec.80 9Feb.81	<.005 " "	.03 .04 .032	<.002 " "	<.02 " "	<.02 " "	<.005 " .008	.0014*** <.001 "	<.02 " "	<.005 " "	<.02 " "	<.02 " "	4300 230 110,000	430 230 43
Little Pool	20Oct.80 15Dec.80 9Feb.81	" " "	.02 .02 .026	" " "	" " "	" " .04	<.005 <.02 .006	" " "	" " "	" " "	" " "	" " "	93 ≤23 93	93 ≤23 4
Brush Neck Cove	20Oct.80 15Dec.80 9Feb.81	.04 .58 <.04	.10 .02 .062	" .005 <.02	.02 .05 <.02	.79 .09 .10	.011 .024 .040	" " "	.05 .32 .08	.02 .034 .015	.06 .04 .06	" .04 .22	430 ≤23 4,300	430* ≤23 930

*mg/l - for all metals

**μg/l - for all organics

*** Below EPA Drinking Water
Standards

****Results of Brush Neck Cove are
not accurate due to salt water
interference except 9 Feb. 81

Sample
Location

Date

		Benzene	Toluene	Chloroform	Bromoform	Bromodichloromethane	Dibromochloromethane	Carbon Tetrachloride	Tetrachloroethylene	Trichloroethylene	1,1,1 - Trichloroethane
Keye Bk at rwick Ave	20Oct.80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	15Dec.80	"	"	"	"	"	"	"	"	"	"
	9Feb.81	"	"	"	"	"	"	"	"	1	"
ttle Pond	20Oct.80	"	"	"	"	"	"	"	"	<1	"
	15Dec.80	"	"	"	"	"	"	"	"	"	"
	9Feb.81	"	"	"	"	"	"	"	"	"	"
ush Neck	20Oct.80	"	"	"	"	"	"	"	"	"	"
	15Dec.80	"	"	"	"	"	"	"	"	"	"
	9Feb.81	"	"	"	"	"	"	"	"	"	"

ug/l - for all organics

MEMORANDUM: REGION I

TO: Lori Fucarile

FROM: John M. Panaro

SUBJECT: Analysis of Truk-Away Landfill Headspace Samples

DATE: July 26, 1982

CC: File

IN REPLY REFER TO:

COMMENTS: The Truk-Away Landfill headspace samples, labelled leachate seep west face, leachate S.E. face, stream N.E. face, #6, stream southend and leachate west #2, were analyzed on the OVA on July 23, 1982. The OVA-128 was used with a B-8 column at room temperature, and the fast gear train was used in the strip chart recorder. The only samples that contained contamination other than methane were the leachate west #2 and the leachate S.E. face samples. Both samples had two peaks and only one was tentatively identified* in each. One of the peaks identified in the leachate west #2 sample was tentatively identified as tetrachloroethylene while toluene was the peak that was tentatively identified in the leachate S.E. face sample.

* Positive identification requires identification on three separate polarity columns.

John M. Panaro

John M. Panaro

Enclosure

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